

Helena

**Asset® PPS 5-15-1**

FOR USE IN PRECISION PLACEMENT SYSTEM APPLICATION EQUIPMENT

## GUARANTEED ANALYSIS

Total Nitrogen (N)	5.00%
5.00% Ammoniacal Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	15.00%
Soluble Potash (K <sub>2</sub> O)	1.00%
Boron (B)	0.02%
Copper (Cu)	0.05%
Iron (Fe)	0.10%
0.10% Chelated Iron (Fe)	
Manganese (Mn)	0.05%
0.05% Chelated Manganese (Mn)	
Molybdenum (Mo)	0.0005%
Zinc (Zn)	0.05%
0.05% Chelated Zinc (Zn)	

Derived from polyammonium phosphates, ammonium carboxylates, potassium phosphates, phosphoric acid, manganese EDTA, copper EDTA, zinc EDTA, iron HEDTA, sodium octaborate and sodium molybdate.

The chelating agent is EDTA (ethylene diamine tetraacetic acid) and HEDTA (hydroxyethylenediamine tetraacetic acid).

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

CAUTION: Contains BORON and MOLYBDENUM. Crops sensitive to BORON and/or MOLYBDENUM may be injured. Plants containing excess amounts of MOLYBDENUM are toxic to livestock.

See Inside Panel for Additional Precautionary Statements.

Contains 2.1 lbs. of plant nutrients per gallon.

Contains protected technology

SN 1201/1102

WEIGHT PER GALLON: 9.96 lbs. (4.52 kg)

Information about the components of this lot of fertilizer may be obtained by writing to Helena Chemical Company, 225 Schilling Boulevard, Suite 300, Collierville, TN 38017 and giving the lot number which is found on the container.

Information regarding the contents and levels of metals in this product is available on the Internet at <http://www.aapfco.org/metals.htm>.

F224

MANUFACTURED BY  
HELENA CHEMICAL COMPANY  
225 SCHILLING BOULEVARD, SUITE 300  
COLLIERVILLE, TN 38017

**PRECAUTIONARY STATEMENTS****CAUTION**

**BEFORE USING THIS PRODUCT, READ ALL PRECAUTIONS, DIRECTIONS FOR USE, CONDITION OF SALE—LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES.**

May be harmful if swallowed, inhaled, or absorbed through skin. May cause eye irritation. Avoid breathing dust or spray mist. Avoid contact with skin, eyes, and clothing. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The degree of spray application drift hazards varies with type of products, application conditions, and vegetation near the spray area. Drift minimization is the responsibility of the applicator. Always consult your local and state agricultural authorities for information regarding avoiding or minimizing spray drift. In addition, follow precautionary statements on accompanying pesticide label(s).

**WHAT TO DO IN CASE OF CONTACT:**

**IF INHALED:** Move victim to fresh air. Give artificial respiration if needed. See a physician.

**IF SWALLOWED:** Give a large amount of water to drink, make person vomit and immediately call a physician. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF IN EYES:** Immediately flush eyes with clean water for at least 15 minutes. Call a physician if irritation persists.

**IF ON SKIN:** Remove contaminated clothing and wash skin with soap and water. Call a physician if irritation persists.

If contact is made with a spray solution containing pesticides, follow the "Statement of Practical Treatment/First Aid" on the pesticide label(s).

**STORAGE AND DISPOSAL**

Store in original container only. Keep packages tightly closed and do not allow water to be introduced to container contents. Do not store this product near heat Database and format copyright © by Vance Communication Corporation.

or open flame. This product will freeze at temperatures less than 30°F. Thawing occurs readily at temperatures greater than 32°F.

**Container Disposal:** Empty packaging should be offered for recycling or disposal in accordance with Federal, State and Local authorities. If packaging is burned, stay out of smoke.

For help in chemical emergencies involving spill, leak, fire or exposure, call toll free 1-800-424-9300.

**GENERAL INFORMATION**

ASSET® PPS is a plant nutrient solution that contains a proprietary fertilizer additive designed for use in Precision Placement System (PPS) application equipment. ASSET® PPS applications are also possible through conventional fertilizer spray equipment. This fertilizer is intended as a supplement to a regular fertilizer program and may not, by itself, provide all of the nutrients normally required by crops or other intended plants.

**USE RECOMMENDATIONS**

For in-furrow, banded, side dressed or drill applications, use ASSET® PPS at the rate of 16-64 oz. (1-4 pints) per acre. Use lower rates when using direct in-furrow applications and higher rates when banding or side dressing.

In drip irrigation, apply 1-4 pints of ASSET® PPS per acre.

ASSET® PPS is compatible with a wide range of fertilizers and micronutrients when used at the manufacturers recommended use rates. However, it is recommended that a "jar test" be performed prior to the actual application. In the event of compatibility problems, the addition of a stabilizing/compatibility agent such as BUFFER P.S. is recommended.

For applications through PPS equipment, follow the calibration and use guidelines below:

**OPERATION**

Place adequate chemical in the tank and check to ensure all connections are right. Turn on the pump at the cab control using lighted rocker switch and turn the control knob to the max position.

Priming the first time may take a few minutes. If pump fails to prime, loosen check on the T-Body nearest the "T", tighten as soon as pumps starts to prime. Once the liquid reaches the pump, pressure will begin to slowly rise as liquid enters the main trunk line and air is purged out of the system.

Operate at full pressure (60 psi max.) making sure all Micro-Tubes™ are flowing and that there are no leaks. After checking for operation of all tubes and ensure there are no leaks, adjust to desired operating pressure, as determined in the calibration procedure, using the control knob in the cab. Pressure may take a few seconds to stabilize.

**CALIBRATION**

**Note:** The manufacturer does not recommend application rates or pressure settings. The manufacturer is not responsible for misapplication. The operator is responsible for making certain the output is correct. This is done by actually using a calibration tube to catch the output for a specified time to determine the correct operating pressure. If there are any questions, please contact your Helena Chemical Sales representative or call Helena Chemical Parts Division at 1-800-235-9531.

Using the following formula OR chart, determine the number of milliliters per minute per row. Then follow the next steps.

**Formula**

Flow (ml/min/row) = [Rate (oz/acre) × Speed (mph) × Width (inches/row)]/200.6

**Chart**

Shows ml/min/row

Rate	3 mph	4 mph	5 mph	6 mph	7 mph	8 mph
16 oz/ac 30" Rows	7.1	9.5	12.9	14.3	16.7	19.1
32 oz/ac 30" Rows	14.3	19.1	23.9	28.7	33.5	38.2
48 oz/ac 30" Rows	21.5	28.7	35.8	43.0	50.2	57.4
64 oz/ac 30" Rows	28.7	38.2	47.8	57.4	66.9	76.5

Be sure to use undiluted ASSET® PPS when calibrating. Do not calibrate using water. Also, make sure all air is purged from the lines and all lines are flowing.

Start by operating the system at approximately 15 PSI, allow the pressure to stabilize. Catch the output from one row for one minute. Compare the output with the above table. Readjust the pressure to a new level and repeat this process until you obtain the right flow.

**PRECAUTIONS**

Consult the ASSET® PPS label for precautions and safe handling.

Periodically check to make sure all Micro-Tubes™ are working. This is most easily accomplished by observing the actual output.

Flow should be checked periodically and recalibrated, if necessary.

Shut the pump off immediately if the pressure drops rapidly. The problem could be a damaged supply line.

Due to pressure build up in the trunk line and low flows, several seconds are required after the pump is turned off before the ASSET® PPS flow actually stops.

If diluted ASSET® PPS is used, recalibrate the system. Do not cut Micro-Tubing™ except to repair the delivery end. Always use a sharp razor to cut. All rights reserved.

**CONDITIONS OF SALE—LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES**

Read the Conditions of Sale—Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

This label is believed to be reliable and should be followed carefully. Injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or the seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

© Copyright Helena Holding Company, 2003.

ASSET® is a registered trademark of Helena Holding Company.

**Disclaimer:** Always refer to the label on the product before using Helena or any other product. VID 3.7.05

**ASSET PPS**

Helena Chemical Company  
PH: 901-761-0050  
CHEMTREC: 1-800-424-9300  
Effective Date: 11-02-00  
Product: ASSET PPS

**I. IDENTIFICATION**

**Chemical Name:** NOT APPLICABLE, FORMULATED MIXTURE

**Chemical Family:** METAL CHELATES AND FERTILIZERS

**Formula:** NOT APPLICABLE, FORMULATED MIXTURE

**Synonyms:** NONE

**CAS Number:** TRADE SECRET

**EPA Number:** NONE REQUIRED

**II. PHYSICAL DATA**

**Boiling Point:** >100 DEGREES C.

**Freezing Point:** <35 DEGREES F.

**Spec Gravity:** 1.194 GMS/CC

**Vapor Pressure:** NOT ESTABLISHED

**Vapor Density:** NOT ESTABLISHED

**Solubility:** 99%

**Volatiles:** <0.5%

**Evaporation:** NOT ESTABLISHED

**Melting Point:** NOT APPLICABLE

**Appearance:** CLEAR, BLUEISH GREEN LIQUID, LOW ODOR

**III. INGREDIENTS**

Material	CAS Number	Percent	TLV	Hazard
PROPRIETARY BLEND OF POLYAMMONIUM PHOSPHATES, AMMONIUM CARBOXYLATES, POTASSIUM PHOSPHATES AND PHOSPHORIC ACID		100.00	10 MG/M3	SKIN & EYE IRRITANT

**IV. FIRE AND EXPLOSION HAZARD**

**Flash Point:** NON-COMBUSTIBLE

**Autoignition Temp:** NOT APPLICABLE

**Flammable Limit:** NOT APPLICABLE

**Extinguishing Media:** NON-COMBUSTIBLE PRODUCT. USE EXTINGUISHING MEDIA FOR UNDERLYING CAUSE OF FIRE.

**Special Fire Fight Proc:** WEAR POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL.

**Fire and Expl Hazard:** PRODUCT GENERATES TOXIC AND IRRITATING FUMES UNDER FIRE CONDITIONS.

**V. HEALTH HAZARD**

**Carcinogen Information:** NONE CURRENTLY KNOWN.

**ACUTE EFFECTS OF OVER EXPOSURE**

**Swallowing:** MAY BE HARMFUL IF INGESTED.

**Skin Absorption:** MAY BE HARMFUL BY SKIN ABSORPTION.

**Inhalation:** INHALATION MAY CAUSE IRRITATION TO NOSE AND THROAT.

**Skin contact:** SKIN CONTACT MAY CAUSE IRRITATION.

**Eye Contact:** DIRECT EYE CONTACT MAY RESULT IN SEVERE IRRITATION.

**Chronic Effects:** NONE CURRENTLY KNOWN.

**Other Hazard:** NONE CURRENTLY KNOWN.

**EMERGENCY AND FIRST AID PROCEDURES**

**Swallowing:** GIVE A LARGE AMOUNT OF WATER TO DRINK, MAKE PERSON VOMIT AND IMMEDIATELY CALL A PHYSICIAN. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

**Skin:** REMOVE CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WATER. CALL A PHYSICIAN IF IRRITATION DEVELOPS OR PERSISTS.

**Inhalation:** MOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NEEDED. IMMEDIATELY CALL A PHYSICIAN.

**Eyes:** FLUSH EYES WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. CALL A PHYSICIAN IF IRRITATION DEVELOPS OR PERSISTS.

**Notes to Physician:** IN THE EVENT OF AN ADVERSE RESPONSE, TREATMENT SHOULD BE DIRECTED TOWARD CONTROL OF THE SYMPTOMS. INGESTION MAY CAUSE CORROSIVE DAMAGE TO THE DIGESTIVE TRACT.

**VI. REACTIVITY**

**Stability:** Stable

**Conditions to Avoid:** NONE CURRENTLY KNOWN

**Polymerization:** Will Not Occur

**Conditions to Avoid:** NONE CURRENTLY KNOWN.

**Incompatibility material:** PRODUCT MAY REACT VIGOROUSLY WITH ACIDIC MATERIALS.

**Hazardous Combustion:** MAY PRODUCE AMMONIA GAS AND OXIDES OF CARBON UNDER FIRE CONDITIONS.

**VII. SPILL OR LEAK PROCEDURES**

**Spill or Leak Proc:** CONTAIN SPILL. IF UNCONTAMINATED, RECOVER AND REUSE PRODUCT. IF CONTAMINATED, ABSORB MATERIAL AND PLACE IN CHEMICAL WASTE CONTAINERS FOR PROPER DISPOSAL.

**Waste Disposal Method:** THIS MATERIAL MUST BE DISPOSED OF ACCORDING TO FEDERAL, STATE, OR LOCAL PROCEDURES UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT.

**VIII. SPECIAL PROTECTION INFORMATION**

**Respiration:** NONE NEEDED UNDER NORMAL CONDITIONS. UNDER FIRE CONDITIONS OR IF VAPORS EXCEED TLV USE NIOSH/MSHA APPROVED RESPIRATOR.

**Ventilation:** LOCAL EXHAUST SUFFICIENT.

**Gloves:** IMPERVIOUS

**Eyes:** SPLASH PROOF GOGGLES.

**Other:** EMERGENCY SHOWER, EYE WASH STATION, IMPERVIOUS APRON AND FOOTWEAR.

**IX. SPECIAL PRECAUTIONS**

**Special precaution:** KEEP OUT OF REACH OF CHILDREN. DO NOT STORE WITH FOOD, FEED, OR OTHER MATERIAL TO BE USED OR CONSUMED BY HUMANS OR ANIMALS. DO NOT CONTAMINATE WATER SUPPLIES, LAKES, STREAMS, OR PONDS. PROTECT AGAINST PHYSICAL DAMAGE. KEEP SEPARATE FROM OXIDIZING AND ACIDIC MATERIALS.

**Other precaution:** NONE CURRENTLY NEEDED.

**X. SHIPPING INFORMATION**

**Shipping name:** NOT REGULATED BY DOT, IATA, OR IMO

**Hazard Class:** NONE

**Identification No:** NONE

**Labels Required:** NONE

**Placarding:** NONE

**Freight Class:** COMPOUND, FERTILIZER (MANUFACTURED FERTILIZER) LIQUID, NOIBN

Chemical Name	Equivalent R.Q.
NOT APPLICABLE	NOT APPLICABLE

**XI. GENERAL PRODUCT INFORMATION**

**National Fire Protection Association Rating:**

(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

**Health:** 2

**Fire:** 0

**Reactivity:** 0

**S.A.R.A. Title III Hazard Classification:** (Yes/No)

**Immediate (Acute) Health:** Y

**Delayed (Chronic) Health:** N

**Sudden Release of pressure:** N

**Fire:** N

**Reactive:** N

Mail inquiries to: 225 Schilling Blvd., Suite 300  
Collierville, TN 38017

Helena Chemical Company believes that the data contained herein is factual. This data is not to be taken as a warranty or representation of legal responsibility. It is offered solely for your consideration, investigation and verification.

VID 7.31.03